

REMARKS

Preliminarily, Applicants respectfully request the Examiner to confirm receipt of the certified copy of the foreign priority document from the International Bureau. The certified copy of the foreign priority document is shown as the third entry from the bottom in PAIR containing thirty-eight pages and having a mailroom date of February 25, 2005.

The amendment to claim 1 is based on the description at page 24, lines 3-5 of the specification. The amendment to claim 2 is based on the description at page 25, lines 3-7 of the specification.

Entry of the amendments and review and reconsideration on the merits are requested.

In response to the rejection under 35 U.S.C. § 112, first paragraph, claims 1 and 2 have been amended to delete the expression "substantially without using an aqueous medium" objected to by the Examiner. Withdrawal of the rejection is respectfully requested.

Claims 1, 5-12 and 18 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,716,945 to DeSimone et al. Claim 4 was rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over DeSimone et al. Claims 2, 3, 13-17 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over DeSimone et al.

Applicants traverse, and respectfully request the Examiner to reconsider for the following reasons.

1. Patentability of Amended Claim 1 over DeSimone et al.:

The fluoropolymer producing method of the amended claim 1 comprises polymerizing a radical polymerizable monomer polymerization in a defined reaction-field to give the fluoropolymer avoiding the use of carbon dioxide. The defined reaction-field is in a supercriticality-expression state and under a pressure of not higher than 40 MPa and a temperature of not higher than that higher by 100°C than the supercriticality-expression temperature of the defined reaction-field. This means that the method of amended claim 1 proceeds without carbon dioxide. That is, the method of this invention uses the monomer itself and not carbon dioxide as the reaction field in a supercriticality-expression state, and can provide fluoropolymers having a high molecular weight and a narrow molecular weight distribution.

On the other hand, the method of DeSimone et al. uses carbon dioxide as a polymerization reaction field. This is clear from DeSimone et al. at col. 2, lines 44 to 45 and lines 53 to 54 (“The reaction mixture typically employs carbon dioxide as a continuous phase”, “In one preferred embodiment, the CO₂ is utilized in a supercritical phase”).

Therefore, because the method of amended claim 1 differs from DeSimone et al. with respect to one or more elements thereof, amended claim 1 therefore defines novel subject matter and is not anticipated by DeSimone et al. Furthermore, because DeSimone et al. specifically teaches one of ordinary skill to employ carbon dioxide as a reaction field for polymerization, whereas the present invention as defined in amended claim 1 teaches to the contrary, namely, that the polymerization is carried out avoiding the use of carbon dioxide, it is respectfully submitted that claim 1 is also patentable over DeSimone et al. Namely, there is nothing in the

cited prior art which would teach or suggest the desirability of carrying out the polymerization method described therein without carbon dioxide.

2. Patentability of Amended Claim 2 over DeSimone et al.:

The method of claim 2 of this invention comprises polymerizing a radical polymerizable monomer in a defined reaction-field in the presence of carbon dioxide amounting to 10% or less of the total number of moles of the carbon dioxide and the radical polymerizable monomer. In the method of amended claim 2, carbon dioxide also does not serve as a reaction field because the amount thereof is too low. Rather, in the method of amended claim 2, carbon dioxide is a diluent for the radical polymerizable monomer(s) in the reaction field and serves to remove the heat of reaction. Further, the small amount of carbon dioxide can increase the solubility of the radical polymerization initiator in the reaction field and the stability of fluoropolymer particles thus formed, and can also prevent the particles from adhering to one another as a result of swelling as described at page 23, lines 18 to 25 of the specification.

On the other hand, the method of DeSimone et al. uses carbon dioxide as a polymerization reaction field as mentioned above.

For the above reasons, it is respectfully submitted that amended claim 2 is also patentable over DeSimone et al.

Moreover, claims 3-19 depending on either claim 1 or claim 2, or on both claims 1 and 2, are also patentable for the same reasons that claims 1 and 2 are patentable over DeSimone et al., and withdrawal of the foregoing rejections is respectfully requested.

Withdrawal of all rejections and allowance of claims 1-19 is earnestly solicited.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 10/525,847

Attorney Docket No. Q85912

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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